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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,071

03/30/2007

James E. Usowicz

W-361-02

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11/06/2008

WATERS INVESTMENTS LIMITED

C/O WATERS CORPORATION

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EXAMINER

ROGERS, DAVID A

ART UNIT

PAPER NUMBER

2856

MAIL DATE

DELIVERY MODE

11/06/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/598,071

**Applicant(s)**

USOWICZ ET AL.

**Examiner**

DAVID A. ROGERS

**Art Unit**

2856

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) 11-31, 41, 43-55 and 64-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 32-40, 42 and 56-63 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/17/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I in the reply filed on 21 July 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 11-31, 41, 43-55, and 64-68 are hereby withdrawn from further consideration as being drawn to nonelected invention(s).

### ***Claim Rejections - 35 U.S.C. § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 6-8, 10, 32, 33, 40, 42, 62, and 63 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent 5,242,586 to Ransohoff.

Ransohoff discloses a device for identifying a condition in a fluid system (liquid chromatograph) having a sensor (reference item 24) in communication with the fluid in the fluid system and a controller (reference item 26). The sensor is an optical gas/bubble detector located in the fluid flow line (reference item 18). The fluid flow line has an inlet and an outlet; and the inlet that leads to a fluid moving means (a pump (reference item 12)). The pump functions to inject fluid into the liquid chromatograph column (reference item 16). The sensor will monitor the fluid in the flow line and issue a signal indicative of no gas/bubbles in the flow line. The sensor will also issue a signal

indicative of the presence of gas/bubbles in the flow line. In response to the signals received from the sensor the controller will cause fluid to flow from a fluid movement means (a pump (reference item 12)) or will cause fluid to stop flowing from the fluid movement means.

***Claim Rejections - 35 U.S.C. § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ransohoff as applied to claim 4 above, and further in view of United States Patent 4,939,943 to Strohmeier.

Ransohoff teaches the use of a pump and the fluid movement means for a liquid chromatograph. Ransohoff does not teach the use of a metering syringe to move the liquid to the chromatograph.

Strohmeier teaches that it is know to use a metering syringe to move small amounts of liquid (aliquots) to a liquid chromatograph.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Ransohoff with the teachings of Strohmeier in order to use a metering syringe as Strohmeier teaches that these are known to be useful for delivering small amounts of fluid to a liquid chromatograph.

6. Claims 34-39 and 56-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ransohoff as applied to claims 1 and 40 above, and further in view of Japanese Laid Open Patent Application Publication JP 07005157 to Sogawa *et al.*

Ransohoff teaches the detection of a gas bubble as part of a liquid chromatograph. As noted above the sensor can be an optical sensor. An optical sensor would normally require a light emitter and a light receiver.

Sogawa *et al.* also teaches the use of optical gas sensors (reference items 18 and/or 20) for a liquid chromatograph. As seen the sensors comprise light transmitters (reference items 22 and/or 26) and light receivers (reference items 24 and/or 28).

With regard to claims 35-39 and 57-61 both Ransohoff and Sogawa *et al.* teach the use of the optical bubble detector as part of a tube. The tube will have to be transparent at least in the region of where the optical sensor is located so that light will be able to be transmitted from the light source to the light receiver.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Ransohoff with the teachings of Sogawa *et al.* in order to use optical sensors comprising light emitters and light receivers as this would allow the bubble to be detected as taught by Sogawa *et al.*

***Allowable Subject Matter***

7. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID A. ROGERS whose telephone number is (571)272-2205. The examiner can normally be reached on Monday - Friday (0730 - 1600). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David A. Rogers/  
Primary Examiner, Art Unit 2856